ABSTRACT

A modified human granulocyte-colony stimulating factor(hG-CSF) is produced by culturing a microorganism transformed with an expression vector comprising a gene encoding a modified hG-CSF to produce and secrete the modified hG-CSF to periplasm, said modified hG-CSF being obtained by replacing at least one of the 1st, 2nd, 3rd and 17th amino acids of wild-type hG-CSF(SEQ ID NO: 2) with other amino acid